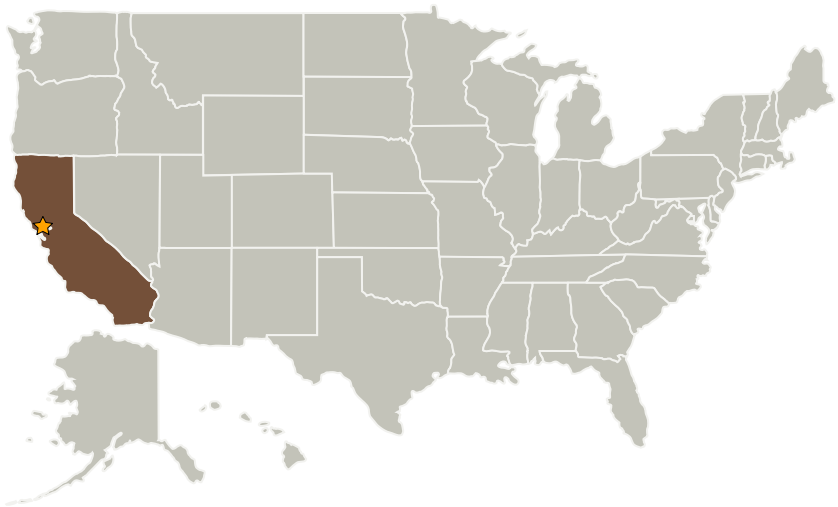
Aggregating Secondary Source Data for Air Cargo Prescreening, Phase I

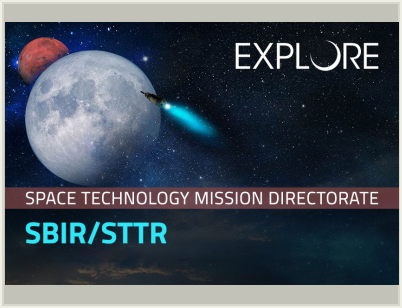
Completed Technology Project (2005 - 2005)

Project Introduction

We propose to improve the effectiveness of air cargo prescreening by enabling background knowledge about companies and products to be used for threat assessment. The Transportation Security Administration's (TSA) current approach for pre-screening air cargo shipments is based primarily on the Known Shipper Program, which has several shortcomings. By combining sophisticated data extraction and integration technology with state-of-the-art data mining capabilities, threat assessment rules can be developed to help identify high-risk cargo. However, threat assessment relies on having data about the entities being assessed. In this project, we propose to develop novel data aggregation methods to automatically gather information about companies and products from corporate web sites, business directories, and other internet sources. We can then augment primary data sources (cargo manifest, database of past cargo shipments, package characteristics such as weight and volume) with additional background data (shipper and receiver information, shippable goods information) to perform threat assessment, and thereby route high-risk cargo for additional inspection. The use of this background data has great potential to significantly improve the ability of the TSA to detect vulnerabilities that may arise in the shipment of air cargo to, from, and within the United States.

Primary U.S. Work Locations and Key Partners





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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Fetch Technologies	Supporting Organization	Industry	El Segundo, California

Primary U.S. Work Locations
California

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Steven Minton

Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  - TX11.6 Ground Computing
    - TX11.6.7 High Performance Data Analytics Platform